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Arizona Corporation Commission

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Phoenix, AZ 85007

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RE: Docket NO. E-01345A-11-0264

Dear Chairman Pierce &amp; Commissioners:

American Solar appreciates the opportunity to respond to the Commission and Arizona Public Service (APS) regarding the 2012 Renewable Energy Standard Implementation Plan. I believe this Commission is committed to a pragmatic solution that achieves one main goal: deployment of renewable resources at the lowest cost to AZ ratepayers. In the following pages I have identified how the residential market in APS service territory can assist in achieving this goal of the Commission.

**2011 and 2012 Residential Grid-tie PV Market – Retrofit Customers**

The largest market for residential PV in APS Service Territory is the retrofit (or existing home) market. In Implementation Year 2011, American Solar estimates that approximately 27 MW of solar capacity will be acquired by APS in this market segment. The table below details the capacity of reservation requests received by APS from the first funding cycle through September 19, 2011. In addition to the 23.51 MW APS has through existing reservations, an additional reservation capacity of 3.42 MW is available through the end of 2011. The total of these requests, which does not include funding from other budgets that are set to collapse into the residential budget on November 1, results in 26.93 MW of residential retrofit PV reservations in 2011.

**2011 Residential PV Program Budget – September 19, 2011**<http://www.aps.com/main/green/choice/solar/funding.html>

Opening Date	4th Quarter 2010 October 2, 2010	1st Quarter 2011 January 1, 2011	2nd Quarter 2011 April 1, 2011	3rd Quarter 2011 July 1, 2011	4th Quarter 2011 October 1, 2011	Rapid Reservation June 10, 2011 to date	Totals
Budget	\$8,015,000	\$6,264,434	\$9,151,309	\$7,707,872	\$4,577,872	\$5,143,958	\$38,970,444
Cumulative Funds Requested	\$6,440,971	\$11,440,188	\$19,707,631	\$25,392,609	\$30,198,902	\$34,910,354	\$35,550,707
Current Budget Available							\$3,419,737
Applications Received	481	424	727	538	458	748	3376
Applications Reserved	481	424	727	538	0	748	2918
Applications Installed	460	385	453	226	80	39	1643
Resulting Capacity	3.30 MW	2.84 MW	4.93 MW	3.77 MW	3.31 MW	5.35 MW	23.51 MW
Estimated Applications Available	0	0	0	0	0	489	489
Application Date of Last Reservation Funded	September 19, 2010	November 16, 2010	March 9, 2011	May 4, 2011	June 10, 2011		



American Solar's analysis of the weekly updates posted on [www.aps.com](http://www.aps.com) show a weekly reservation rate of approximately 603 kW during the first three weeks of September, 2011 at an incentive level of \$1/watt. If this pace of weekly reservation requests were applied to calendar year 2012, APS would see requests totaling over 31 MW from the retrofit residential PV market segment. This is a clear sign that the residential retrofit market is strong and will continue to grow if supported by the ACC in APS's 2012 Implementation Plan.

2011 has seen a continuation of the downward trend in PV system prices. The following table details American Solar's average sales price for residential retrofit contracts through the first three quarters of 2011:

Q1-2011	\$5.05/watt
Q2-2011	\$4.75/watt
Q3-2011	\$4.45/watt

It is American Solar's expectation that the average sales price will continue to drop during Q4-2011 and will likely stabilize in Q1-2012. Drops in system costs are primarily attributable to price drops in PV modules and grid-tie inverters.

In support of continuing a strong residential program in APS Service Territory, American Solar recommends maintaining the Up Front Incentive (UFI) for the residential retrofit PV market at \$1/watt at the start of 2012. Additionally, American Solar recommends the continuation of quarterly funding cycles and a trigger-mechanism that reduces the retrofit UFI to \$0.90/watt when 50% of the 2012 residential retrofit PV budget has been reserved. The total budget recommended by American Solar for the retrofit residential PV market in 2012, assuming an average UFI of \$0.95/watt and 31 MW market capacity, is \$29.45 Million.

#### **2011 and 2012 Residential Grid-tie PV Market – Homebuilder Segment**

An important emerging sector of the residential market is new home construction. Through the APS Energy Star and Solar Homes Program, this segment of the residential market is starting to blossom. Currently APS lists twelve builders offering solar homes through this program at 32 communities throughout its service territory. American Solar has seen an uptick in this sector over the past twelve months and estimates that 5% or more of new homes built in Central Arizona this year will include a PV system.

To provide continuity for builders, American Solar recommends doubling the budget for this market segment from approximately \$2 Million in 2011 to \$4 Million in 2012. American Solar also supports reducing the homebuilder incentive from \$1.95/watt to \$1.45/watt, as proposed by APS in its 2012 Implementation Plan Filling. With the 2012 budget proposed above, an additional 2.75 MW of residential PV systems will be constructed in new sustainable communities, representing approximately 900 new solar homes.

#### **Cost of Residential Solar to APS Ratepayers**

With the reduction in UFI rates during 2011, the cost of residential solar to APS ratepayers has dropped dramatically. As noted in Staff's Report on the APS 2011 Implementation Plan, the cost per kWh for residential PV systems is one of the lowest cost means of acquiring renewable energy for APS's requirements. In 2011, assuming a UFI of \$1.75/watt, Staff estimated the cost of residential PV to be **\$0.0514/kWh**.



With the current UFI of \$1.00/watt and applying the same assumptions Staff used in 2011, the cost of residential PV has been reduced to less than **\$0.0294/kWh**. This means that under this Commission, supporting the vote of \$1/watt for 31 MW of power, rate payers will save approximately \$9.3 million dollars in 2012 over 2011.

**APS Proposed 2012 Incentives (approved in 2011 REST Plan)**

- 15.5MW @ \$1.30/watt = \$20,150,000
  - 15.5MW @ \$1.20/watt = \$18,600,000
- Total = \$38,750,000**

**American Solar Recommendation**

- 15.5MW @ \$1.00/watt = \$15,500,000
  - 15.5MW @ \$0.90/watt = \$13,950,000
- Total = \$29,450,000**

**Estimated Total Savings = \$9.3 million**  
**(APS PROPOSED 2012 INCENTIVES vs. AMERICAN SOLAR RECOMMENDATION)**

**Excess Residential RECs and Settlement Agreement "Gap"**

With strong demand for residential PV systems in APS service territory and an extremely low acquisition cost in terms of cost per kWh to APS ratepayers, American Solar recommends that the Commission approve a residential program budget for 2012 totaling \$39 million.

- \$30 million for the retrofit grid-tie PV market
- \$5 million for the solar hot water/other technologies market (15% of the total residential market)
- \$4 million for the homebuilder grid-tie PV market

Additionally, American Solar recommends that the Commission allow APS to apply all surplus capacity acquired through the residential program toward the 300 MW "Gap" that results from its 2009 Settlement Agreement. The savings that result from acquiring capacity through the residential UFI program will benefit ratepayers through lower compliance costs in future years and reduce the long-term commitment APS ratepayers must make to acquire non-residential and utility scale solar.

I thank the Commission for their leadership and I look forward to meeting with you in the near future to discuss any items you may have questions on.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Seitz", is written over the word "Sincerely,".

Sean M. Seitz  
President